WHAT IS CLAIMED IS:

1. A method of allocating bandwidth in an optical network comprising:
determining a bandwidth requirement of a requested virtual wavelength path between a first node and a second node of a plurality of nodes, each one of said plurality of nodes being coupled to at least one other of said plurality of nodes by at least one of a plurality of optical links, said plurality of nodes and said plurality of links forming the optical network;
determining whether a physical path between said first and said second nodes has at least a portion of said amount of bandwidth available equal to said bandwidth requirement for use by said virtual path; and
allocating said physical path, if said bandwidth requirement is not greater than said amount of bandwidth available on said physical path.

2. The method of claim 1, further comprising:
determining a quality-of-service requirement, said quality-of-service requirement being required for allocation of said requested virtual path; and
determining whether said physical path meets said quality-of-service requirement.

3. The method of claim 1, further comprising:
determining a metric requirement, said metric requirement being required for allocation of said requested virtual path; and
determining whether said physical path meets said metric requirement.

4. The method of claim 3, wherein said metric requirement relates to a latency associated with said requested virtual path.

5. The method of claim 3, wherein said metric requirement relates to a physical distance from said first node to said second node.

6. The method of claim 3, wherein said metric requirement relates to a cost of service associated with said requested virtual path.

7. The method of claim 3, wherein said physical path is configured as a circuit, said circuit comprising said first node, certain ones of said plurality of nodes, certain ones of said plurality of links, and said second node, wherein

said first node is coupled by one of said certain ones of said plurality of links to a node of a first one of a plurality of node/link combinations,

each one of said plurality of node/link combinations comprises one of said certain ones of said plurality of nodes coupled to one of said certain ones of said plurality of links, and

a link of each one of said plurality of node/link combinations is coupled to a node of a next one of said plurality of node/link combinations, except for a link of a last one of said plurality of node/link combinations, said link of said last one of said plurality of node/link combinations being coupled to said second node.

8. A method of allocating bandwidth in an optical network comprising:

(a) determining a bandwidth requirement of a requested virtual wavelength path between a first node and a second node of a plurality of nodes, each one of said plurality of nodes being coupled to at least one other of said plurality of nodes by at least one of a plurality of optical links, said plurality of nodes and said plurality of links forming the optical network;

(b) selecting a physical path between said first and said second nodes from a plurality of such physical paths;

(c) determining whether said physical path has enough available bandwidth to meet said bandwidth requirement of said requested virtual path;

(d) repeating steps (b) and (c) until either an acceptable physical path is found, or every one of said plurality of physical paths has been selected; and

(e) allocating said acceptable physical path, if said acceptable physical path is found.

9. The method of claim 8, further comprising determining whether said acceptable physical path will be available in the future, if said acceptable physical path is not currently available.

10. The method of claim 8, step (a) further comprising determining a quality-of-service requirement, said quality-of-service requirement being required for allocation of said requested virtual path; and step (c) further comprising determining whether said physical path meets said quality-of-service requirement.

11. The method of claim 8, step (a) further comprising determining a metric requirement, said metric requirement being required for allocation of said requested virtual path; and step (c) further comprising determining whether said physical path meets said metric requirement.

12. The method of claim 11, wherein said metric requirement relates to a latency associated with said requested virtual path.

13. The method of claim 11, wherein said metric requirement relates to a physical distance from said first node to said second node.

14. The method of claim 11, wherein said metric requirement relates to a cost of service associated with said requested virtual path.

15. A method of allocating bandwidth in an optical network comprising:

requesting a virtual wavelength path between a first node and a second node of a plurality of nodes, each one of said plurality of nodes being coupled to at least one other of said plurality of nodes by at least one of a plurality of optical links, said plurality of nodes and said plurality of links forming the optical network, wherein said virtual wavelength path has a bandwidth requirement associated therewith;

determining an amount of bandwidth available between said first and said second nodes;

and

allocating at least a portion of said amount of bandwidth available between said first node and said second node equal to said bandwidth requirement, if said bandwidth requirement is not greater than said amount of bandwidth available between said first node and said second node.

16. The method of claim 15, further comprising:

determining a quality-of-service requirement, said quality-of-service requirement being required for allocation of said virtual path; and

determining whether said physical path meets said quality-of-service requirement.

17. The method of claim 15, further comprising:

determining a metric requirement, said metric requirement being required for allocation of said virtual path; and

determining whether said physical path meets said metric requirement.

18. The method of claim 17, wherein said metric requirement relates to a latency associated with said virtual path.

19. The method of claim 17, wherein said metric requirement relates to a physical distance from said first node to said second node.

20. The method of claim 17, wherein said metric requirement relates to a cost of service associated with said virtual path.